SUMMER 2021
BIOSECURITY NEWSLETTER
nzppi
NEW ZEALAND PLANT PRODUCERS INCORPORATED
NOVEMBER/DECEMBER 2021

Myrtle Rust

Myrtle rust has been spreading rapidly across the country since it was first identified in 2017, attacking plants in the myrtle family including pōhutukawa, mānuka, ramarama, rōhutu, rātā and swamp maire.

Last year it was detected on a *Lophomyrtus bullata* (cultivar) hedge in Ōtautahi, Christchurch, the furthest south an established infection of the plant disease has been seen. Managing the spread of myrtle rust from plant nurseries to other parts of New Zealand is still key to limiting its impact on taonga species.

New Zealanders are encouraged to report any unusual finds of suspected myrtle rust using iNaturalist: detection on new species, unusual symptoms, or in new areas where it hasn't previously been found. https://inaturalist.nz/projects/myrtle-rust-reporter

An online tool is being developed to help producers better manage susceptible species in the nursery. The myrtle rust climate model will help predict high risk periods for infection and forecast optimal times to apply preventative fungicides and non-chemical management methods.

Updated protocols and the online tool will be freely available through NZPPI's website, generously funded by MPI Te Uru Rakāu. NZPPI members will be able to use their website registration log on and new users will need to register first to access the tool.

Photo credits: Department of Conservation, Te Papa Atawhai.


Symptoms on mānuka seedling stem


Symptoms on *Syzygium australe* leaves and stem


Symptoms on ramarama immature fruit


Symptoms on pōhutukawa leaves

Photo credit: Prof. Salvatore Davino.
Tomato fruits showing marbling and decolorations.

Tomato brown rugose fruit virus

Tomato brown rugose fruit virus (ToBRFV) is a biosecurity risk to our capsicum and tomato industries.

It causes yellow and brown spots to appear on fruit, making it unmarketable. It's easily transmitted and in worst case scenarios overseas it has caused up to 100% crop loss.

Tomato plants growing in three greenhouses across Auckland were tested for ToBRFV in December 2020, following a notification that the seed lot used to produce them had tested positive overseas.

None of the plants were showing symptoms, and they tested negative for ToBRFV. MPI retested remaining unplanted seeds and detected a weak positive result for ToBRFV. As a precaution, all tomato plants and remaining seed from this seed lot were removed and destroyed.

This incursion highlights the need for good traceability and hygiene practices within the plant production environment, as seed testing does not provide 100% confidence that imported seed is completely virus free. Plant producers and growers need to be aware of symptoms for early detection.

Pepino Mosaic Virus

Four months after the ToBRFV find, *Pepino mosaic virus* (PepMV) was found in Auckland commercial tomato growing greenhouses.

It is suspected the virus entered New Zealand in contaminated seeds and was propagated in seedling nurseries, moving with the plants into the cropping greenhouses where it was detected in April 2021.

MPI and GIA partners made the decision to allow glasshouse operations to continue, growing and selling tomatoes within New Zealand under heightened hygiene measures.

PepMV is spread on seed, stalks, and leaves and through plant-to-plant contact and propagation. It is transmitted easily on contaminated tools, hands and clothing. Bumblebees used as pollinators are also known to spread the disease.

Photo credit: MPI.
Virus mottling on leaves.

See here for more information about ToBRFV and PepMV virus symptoms and what to look out for: https://www.mpi.govt.nz/biosecurity/major-pest-and-disease-threats/pepino-mosaic-virus-pepmv-in-auckland/

Photo credit: Alix Walles.
Rhaphidophora leaf symptoms.

Rhaphidophora tests negative for viruses

Houseplant forums were abuzz during the winter months about the spontaneous development of variegation in *Rhaphidophora tetrasperma* (or Mini Monstera / Philodendron Minima).

Some people thought the striped leaf patterning was virus infection rather than variegation and suggested the agent could be *Monstera mosaic virus*. Leaf samples from a plant in Auckland and one in Wellington were sent independently to MPI's Plant Health & Environment Laboratory and both tested negative for any viruses.

Peter Tayler of Rainbow Park Nurseries thinks the patterning is a physiological symptom, caused by lower light levels and cooler temperatures through the winter months. *Rhaphidophora tetrasperma* is quite a new houseplant in New Zealand, available since 2020, so this may be the first time houseplant owners have noticed winter symptoms.

The Wellington test plant is now producing new leaves of normal colouration.

Grapevine Algerian latent virus

A new virus was detected in carnations earlier this year and may have been present in New Zealand for some time.

The infected *Dianthus* plants showed chlorotic leaf spots and distortion. Samples were sent to MPI's Plant Health & Environment Laboratory all tested positive for grapevine Algerian latent virus (GALV), a new virus and an unwanted and regulated organism.

Photo credit: PHEL.
GALV in carnations.

A second virus, *Carnation etched ring virus* (CERV) was also detected in the samples. CERV is a common virus in *Dianthus* and is thought to have worldwide distribution. It has previously been reported in New Zealand. It is not known if the observed symptoms were induced by GALV or CERV alone, or a synergistic interaction between GALV and CERV.

GALV has been isolated sporadically across a range of hosts and countries, in Japan, Germany and the Netherlands. It was first identified on an Algerian grapevine *(Vitis vinifera)* in Italy (in 1986) along with grapevine fanleaf virus (GFLV). The potential impacts of GALV on the grapevine industry are not known, as it has only been detected once in grapevines and has not been reported since.

The virus is transmitted mechanically, although it may also be seed-borne and soil-borne. GALV can be isolated from waterways, which means it can persist for long periods outside of the host plant.

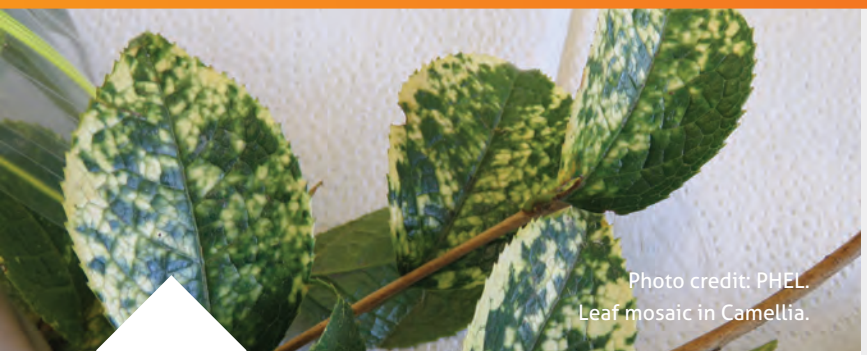


Photo credit: PHEL.
Leaf mosaic in Camellia.

Camellia ringspot associated virus 1

Leaf mosaic and chlorotic spots were observed on *Camellia* plants during a routine surveillance inspection in Palmerston North.

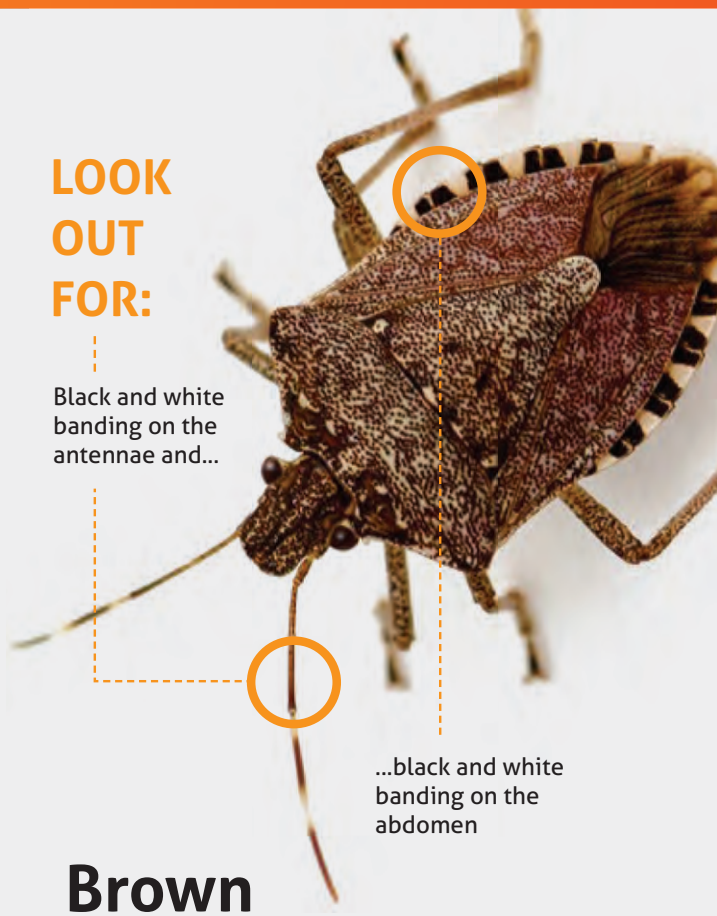
Camellia ringspot associated virus (CRSaV-1) was identified in February 2021, the first time it has been recorded in New Zealand. The virus was first reported in *Camellia japonica* from USA and later found on the same host in Italy and China. The effect of CRSaV-1 is unclear as all symptomatic camellia plants were found to be co-infected by other viruses, already present in New Zealand. The virus was later detected in samples from Auckland and Wellington which indicates it is widespread in New Zealand.

A new to science *Liberibacter*

A new *Liberibacter* species was diagnosed in a strawberry runner production nursery in Katikati in January 2021.

Liberibacter are endosymbiont bacteria which live within insects and can be spread to plants, causing destructive plant diseases. This new *Liberibacter* species is undescribed by science. The vector responsible for spreading it in strawberries has not yet been identified.

Symptoms in strawberry plants included discolouration of leaf edges and decline in vigour of the plants. All affected plants were destroyed.



Brown Marmorated Stink Bug (BMSB)

The BMSB *(Halymorpha halys)* season starts on the 1 September.

As of the 26th November, 18 live BMSB have been found by MPI in 10 consignments from Italy, France, China and the US.

IF YOU THINK YOU HAVE DETECTED A BMSB:

Catch it › **Photograph it** › **Report it**

Call the Biosecurity New Zealand hotline on 0800 80 99 66

Photo credits: Grey Smith.
Japananus sp. juvenile from Palmerston North.

New maple leafhopper found in Palmerston North and Auckland

A new leafhopper (*Japananus* sp.) was detected in March 2021 on Japanese maple, *Acer palmatum* in Palmerston North. It is suspected to be the maple leafhopper (*J. hyalinus*) but a male specimen is needed to confirm which species it is.

The same leafhopper has also been found in four locations in Auckland, with all these observations made on iNaturalist.com.

Overseas, it is reported that *Japananus hyalinus* can gather in large numbers on host plants, however not impacts have been reported. It is not noted as being a vector of viruses or phytoplasmas, although no specific studies have been done to assess this potential. It can spread undetected as eggs inserted into branch nodes when plants are moved during winter dormancy. Literature suggests that most contact insecticides should give more than adequate control at residential sites.

Photo credit: Grey Smith.
Japananus sp. adult from Palmerston North.

TABLE 1.
Acer species that are known hosts of *J. hyalinus* overseas.

Scientific name	Common name
Acer campestre	Field maple
Acer japonicum	Fullmoon maple
Acer palmatum	Japanese maple
Acer negundo	Box-elder
Acer platanoides	Norway maple
Acer pseudoplatanus	Sycamore
Acer saccharinum	Silver maple
Acer monspessulanum	Montpellier ample
Acer buergerianum	Trident maple
Acer truncatum	Shantung maple
Acer rubrum	Red maple
Acer saccharum	Sugar maple
Acer ginnala	Amur maple

IF YOU THINK YOU HAVE SEEN NYMPHS OR ADULT LEAF HOPPERS, PLEASE

Take a photo > **Report it**

Report to iNaturalist or call MPI's pest and disease hotline 0800 80 99 66.

Photo credit: Biosecurity New Zealand. Damage from *Dinoderus minutus*.

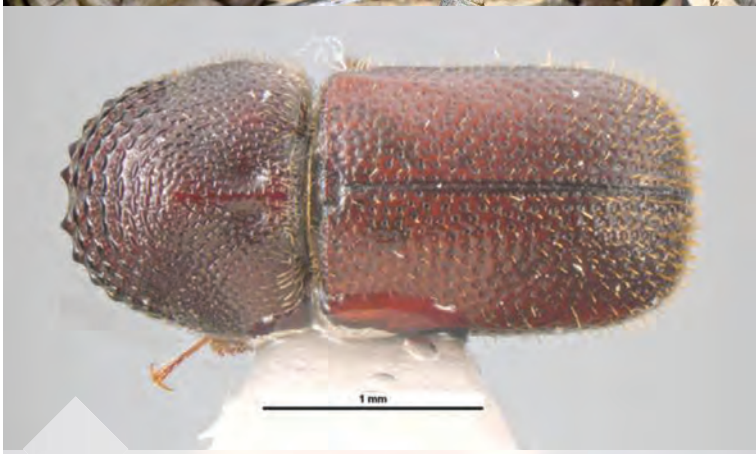
Dinoderus minutus in bamboo – Kerikeri

In March 2021, MPI received a notification of borer in bamboo collected from a bamboo shelterbelt near Kerikeri, Northland.

Several insect samples were taken from the bamboo and identified by PHEL Entomology as *Dinoderus minutus*. It was unclear how long the borer has been present, but multiple life stages were detected and several generations appear to have occurred. Bamboo shelterbelts are commonly used between properties in the Kerikeri area.

Overseas this tropical species is considered a major pest as it can damage bamboo timber which is a commercial product. The borer attacks felled culms and bamboo timber products. Rice, cassava and sugarcane are secondary hosts overseas. There has also been a single detection of *D. minutus on Pinus* spp. in China (Gong Xiuze, 2003.).

Dinoderus minutus is a common interception on imported bamboo products such as bamboo skewers, sushi rolling mats, parasols, etc. This is the first time it has been observed in bamboo growing in NZ. As *D. minutus* does not affect live material, MPI considers that it will have minimal environmental impact in New Zealand, where bamboo is used almost exclusively as shelterbelts or in gardens.



Photo(s) credit: PADL, http://www.padil.gov.au (CC BY-NC 4.0).
Dinoderus minutus.